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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,275	07/02/2003	Rikuro Obara	051319/0035	4068

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EXAMINER	
GILLAN, RYAN P	

ART UNIT	PAPER NUMBER
3746	

MAIL DATE	DELIVERY MODE
06/01/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

ED

Office Action Summary	Application No.	Applicant(s)	
	10/612,275	OBARA ET AL.	
	Examiner	Art Unit	
	Ryan P. Gillan	3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8 and 10-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 10-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 January 2004* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/12/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-4, 8, 10-14 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsieh (6,270,325) in view of Carter (3,652,186) and Wrobel (4,955,791). Hsieh teaches an apparatus for a fan motor comprising: a base (30), a cylindrically-shaped bearing housing (431) integrally formed from the base and having a first opening located at a housing end opposite the base and a second opening located at a housing end adjacent to the base (clearly seen in figure 2), having a hollow interior and a first and a second open end (clearly seen in figure 2); a pair of bearings (41 & 43) set in an interior of the bearing housing; a rotational shaft (13) supported by the pair of bearings; and a retainer cap (31) set through an aperture in the base; a stator (22) fixed to an outer periphery of the bearing housing; a rotor (15) fixed to the rotational shaft and positioned to face the stator; and an impeller fixed (10) to the rotational shaft; a spacer (42), cylindrically shaped, is set in the interior of the bearing housing between the pair of bearings. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate at least one oil groove as a means of keeping the bearings lubricated. A Hsiehn further teaches an end of the rotational shaft towards the base is spherically shaped (clearly seen in figure 2); one bearing, of the pair of bearings, is a

shielded ball bearing (41) and the other is a sleeve bearing (43) having a chamfered edge; a magnet of the rotor having a central part offset from a central part of a core of the stator; the stator is nearer to the base than the magnet, which is fixed to the rotor, and thus creates an attraction of the rotor to the stator, in the direction of the base (clearly seen in figure 2); wherein the shield part and the bearing housing are a unitary one-piece element (clearly seen in figure 2). It would have been obvious to one of ordinary skill in the art at the time of the invention to manufacture said base and said cylindrically-shaped bearing housing into a unitary one-piece element removing the need for fasteners. In In re Larson, 144 USPQ 347 (CCPA 1965) in a legally related manner regarding a brake disc and a clamp assembly of Tuttle et al., several parts are rigidly secured together as a single unit. The constituent parts are so combined as to constitute a unitary whole. Webster's New International Dictionary (2md edition) defines "integral," ***which is synonymous with one-piece,*** "(2) composed of constituent parts making a whole; composite; integrated." The court ruled that the use of one piece construction instead of the structure disclosed in Tuttle et al. (several parts fastened together) would be merely a matter of obvious engineering choice. See also In re Fridolph, 50 CCPA 745, 89 F.2d 509, 135 USPQ 319.

3. Hsieh fails to teach a shield part integrally formed on the bearing housing at an end opposite the base and which extends in a radial direction towards the rotational shaft. A hub, to which the rotational shaft is attached, has a cylindrical part, which is inserted into an aperture in the shield part, wherein a clearance gap between the cylindrical part and the shield part is in a labyrinthine shape. The interior of the bearing

housing is shielded by the shield part and the retainer cap and the pair of bearings are retained in the bearing housing by contact with the shield part and retainer cap, wherein the retainer cap has a cylindrical wall extending axially within an interior of the bearing housing and contacting and supporting at least one of the pair of bearings.

4. Carter teaches a shield part (54 & 55. See fig. 4) formed on the bearing housing (49) at an end opposite the base, the shield part extending in a radial direction towards the rotational shaft (43) and partially enclosing the first opening of the bearing housing. A hub (42), to which the rotational shaft is attached, has a cylindrical part (clearly seen in figure 4, protruding from the hub, along the shaft) extending into the bearing housing through the first opening and forming a labyrinth-shaped gap with the shield part (clearly seen in figure 4). It would have been obvious to one of ordinary skill in the art at the time of the invention to manufacture the shield part and the bearing housing as integral removing the need for fasteners. In In re Larson, 144 USPQ 347 (CCPA 1965) in a legally related manner regarding a brake disc and a clamp assembly of Tuttle et al., several parts are rigidly secured together as a single unit. The constituent parts are so combined as to constitute a unitary whole. Webster's New International Dictionary (2md edition) defines "integral," ***which is synonymous with one-piece,*** "(2) composed of constituent parts making a whole; composite; integrated." The court ruled that the use of one piece construction instead of the structure disclosed in Tuttle et al. (several parts fastened together) would be merely a matter of obvious engineering choice. See also In re Fridolph, 50 CCPA 745, 89 F.2d 509, 135 USPQ 319.

5. It would have been obvious to one of ordinary skill in the art at the time of the invention to create a conventional labyrinthine seal between the hub and the shield as a means of reducing leakage of liquid into the bearing housing without the use of separate sealing elements, thereby reducing cost and improving the life of the seal. It would also have been obvious to one of ordinary skill in the art at the time of the invention to modify Hsieh to incorporate the shield portion of the bearing housing and an aperture receiving a cylindrical portion of the hub as a means of freely embracing the shaft (col. 4 line 40-48).

6. Wrobel teaches a retainer cap (8) with a cylindrical wall (unnumbered, but clearly seen in figure 1) extending axially within an interior of the bearing housing and contacting and supporting at least one of the pair of bearings (15). It would have been obvious to one of ordinary skill in the art a the time of the invention to modify the fan taught by Hsieh by incorporating the retainer cap disclosed by Wrobel as a means of supporting the shaft bearings and being removable for quick and easy assembly or repair of the bearings (col. 2 line 61 - col. 3 line 2).

7. Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsieh, Carter and Wrobel in view of Obara (6,379,129). Hsieh in view of Carter and Wrobel disclose all of the limitations of claim 1, but fail to teach a coil spring interposed between the rotational shaft and the retainer cap and a slide member interposed between the coil spring and the rotational shaft.

8. Obara teaches a coil spring (106) interposed between the rotational shaft (101) and the hub (108) and a slide member (105a) interposed between the coil spring and

the rotational shaft. Although Obara discloses the coil spring interposed between the hub and the shaft, it will equally serve in preloading the bearing to interpose the spring between the shaft and the retainer cap. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hsieh and Carter to incorporate the coil spring and slide member as a means of advantageously pre-loading the ball bearings (col.1 lines 10-14).

9. Claims 6 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsieh, Carter and Wrobel in view of Schmider et al. (5,176,509). Hsieh in view of Carter and Wrobel disclose all of the limitations of claims 1 and 2, but fail to teach a retainer cap further with at least one engagement claw for snapping onto the base and a magnet of the rotor having a central part offset from a central part of a core of the stator, wherein the rotor is attracted in a direction away from the base.

10. Schmider et al. teach a retainer cap (3) with at least one engagement claw (41) for snapping onto the base (40) and a magnet (15) of the rotor having a central part offset from a central part of a core of the stator (10), wherein the rotor is attracted in a direction away from the base. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the engagement claw into the retainer cap as a means of secure fastening without additional fastening elements or parts. It would also have been obvious to one of ordinary skill in the art at the time of the invention to configure the magnet of the rotor and the stator in such a way as to optimize the use of the different polarities of the stator and the magnet thus improving motor efficiency (col. 2 lines 24-33).

Response to Arguments

11. Applicant's arguments with respect to claims 1 and 17 have been considered but are not persuasive. Applicant argues that the cited prior art fails to disclose a base and bearing housing made of a unitary one piece element and a shield part integrally formed on the bearing housing. However as cited above, it would have been obvious to one of ordinary skill in the art at the time of the invention to manufacture the shield part and the bearing housing as integral, as well as, said base and said cylindrically-shaped bearing housing forming a unitary one-piece element, removing the need for fasteners. In In re Larson, 144 USPQ 347 (CCPA 1965) in a legally related manner regarding a brake disc and a clamp assembly of Tuttle et al., several parts are rigidly secured together as a single unit. The constituent parts are so combined as to constitute a unitary whole. Webster's New International Dictionary (2md edition) defines "integral," ***which is synonymous with one-piece,*** "(2) composed of constituent parts making a whole; composite; integrated." The court ruled that the use of one piece construction instead of the structure disclosed in Tuttle et al. (several parts fastened together) would be merely a matter of obvious engineering choice. See also In re Fridolph, 50 CCPA 745, 89 F.2d 509, 135 USPQ 319.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan P. Gillan whose telephone number is 571-272-8381. The examiner can normally be reached on 8:30 am - 5:00 pm; Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on 571-272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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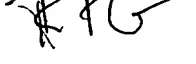

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